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PTO/SB/21 (09-04)

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/883,376
	Filing Date	Jun 19, 2001
	First Named Inventor	Zimmerman, Thomas Guthrie
	Art Unit	2123
	Examiner Name	Thomas Stevens
Total Number of Pages in This Submission	Attorney Docket Number	ARC920000049US1

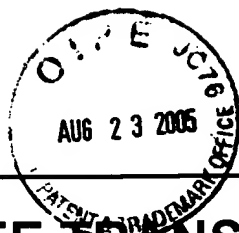
ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance communication to (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm Name	Lacasse & Associates, LLC		
Signature			
Printed name	Ramraj Soundararajan		
Date	August 23, 2005	Reg. No.	53832

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FEE TRANSMITTAL for FY 2005

Effective 10/01/2004. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT 500.00

Complete if Known

Application Number	09/883,376
Filing Date	6/19/2001
First Named Inventor	Thomas Guthrie Zimmerman
Examiner Name	Thomas Stevens
Art Unit	2123
Attorney Docket No.	ARC920000049US1

METHOD OF PAYMENT

☐ Check ☐ Credit Card ☐ Money Order ☐ Other

☒ Deposit Account:

Deposit Account Number: 09-0441
Deposit Account Name: IBM CORPORATION

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments

☒ Charge any additional fee(s) or any underpayment of fee(s)

☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	790	2001	395	Utility filing fee	
1002	350	2002	175	Design filing fee	
1003	550	2003	275	Plant filing fee	
1004	790	2004	395	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) \$ 0

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1202	18	2202	9	Claims in excess of 20	
1201	88	2201	44	Independent claims in excess of 3	
1203	300	2203	150	Multiple dependent claim, if not paid	
1204	88	2204	44	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) \$ 0

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	430	2252	215	Extension for reply within second month	
1253	980	2253	490	Extension for reply within third month	
1254	1,530	2254	765	Extension for reply within fourth month	
1255	2,080	2255	1,040	Extension for reply within fifth month	
1401	340	1401	170	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500
1403	300	2403	150	Request for oral hearing	
1451	1,510	1452	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,370	2501	685	Utility issue fee (or reissue)	
1502	490	2502	245	Design issue fee	
1503	660	2503	330	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify):

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) \$500

Name (Print/Type)	Ramraj Soundararajan	Registration No. (Attorney/Agent)	53832	Telephone	703-838-7683
Signature	Ramraj Soundararajan	Date	August 23, 2005		



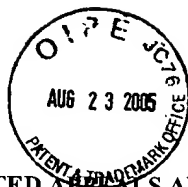
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPEAL BRIEF – 37 C.F.R. § 1.192

U.S. Patent Application 09/883,376 entitled,
“Manipulation of Electronic Media Using Off-Line Media”

REAL PARTY IN INTEREST: International Business Machines Corporation

08/24/2005 JADD01 00000066 090441 09883376
01 FC:1402 500.00 DA



RELATED APPEALS AND INTERFERENCES:

None

STATUS OF CLAIMS:

Claims 1-31 are pending.

Claims 16-26 stand rejected under 35 USC 102(e) as being anticipated by Mault et al. (USP 6790178).

Claims 1-15 and 27-31 stand rejected under 35 USC 103(a) as being obvious by Mault et al. in view of Boldt et al. (USP 6349304).

STATUS OF AMENDMENTS:

No amendments were filed after the final rejection of 05/03/2005.

SUMMARY OF CLAIMED SUBJECT MATTER:

The presently claimed invention provides for the simulation of a real tool (*see page 8, lines 12-15*) in which a computer displays data (*Fig. 1, element 110*) based upon a selected portion of an image printed on an off-line medium (*see page 8, lines 8-10*). The system comprises a probe device (*Fig. 1, element 104*) comprising at least a hand-held probe section, which transmits information of the selected portion to the computer (*see page 8, lines 8-10 and page 13, lines 4-6*) and a storage medium retaining multimedia data representative of an output of a real tool examining a selected portion of an actual item corresponding to said selected portion of said image, (*see page 9, lines 14 and 15*). Multimedia data is retrieved from the storage medium, displayed on a computer, and is synchronized to a position of the portion of the offline medium (*Fig. 1, element 106*) selected by the hand-held probe section (*see page 10, lines 8-10*). The computer then displays said multimedia data to the movement and function of a real tool.

The disclosed computer simulates a real tool by displaying data based upon a selection of a location of an image printed on an off-line medium by a hand-held probe or hand held image (*Fig. 4, element 104*); the off-line medium includes a plurality of icons printed thereon, each of which indicates a different real tool (*see page 8, lines 8-15 and page 9, lines 12-16*). Position information representative of a location of an image printed on the off-line medium is obtained

by the hand-held probe part is pointing to it (*see page 8, lines 10-17*). Subsequently, multimedia data from the storage media is synchronized to the location pointed to by the hand-held probe part (*see page 14, lines 5-6*). After synchronization, multimedia data representing the output of a real tool examining a location of an actual item corresponding to said location of said image pointed to by said hand-held probe part is retrieved (*see page 10, lines 8-10*) and displayed (*see page 14, lines 5-6*).

GROUND OF REJECTIONS TO BE REVIEWED ON APPEAL:

1. Was a proper rejection made under 35 U.S.C. § 102(e) using existing USPTO guidelines?
2. Was a proper rejection made under 35 U.S.C. § 103(a) using existing USPTO guidelines?

ARGUMENT:

REJECTIONS UNDER 35 U.S.C. § 102(e)

Claims 16-26 stand rejected under 35 USC 102(e) as being anticipated by Mault et al. (USP 6790178).

To be properly rejected under 35 U.S.C. 102(e), each and every claim element must be shown in a single reference. Mault fails to provide at least the following elements: a hand-held imager detecting a region of off-line media; transmitting the electronic representation of said region to said computer; and a presentation device presenting electronic media synchronized to said region of off-line media. The Examiner appears to have included the Mault reference primarily for its teaching of a physiological monitor and storage of parameters collected from a human body, within a computing device. An exemplary embodiment of the Mault invention is disclosed in the background section; specifically, a diabetic patient monitoring and recording blood glucose levels several times a day. The Mault reference differs from the present invention in that the physiological monitor of the Mault reference is only able to obtain data from a physiological input, in other words, the finger of a diabetic patient. The Mault reference simply provides for obtaining parameters and storing them. Furthermore, the physiological monitor of the Mault reference is also unable to detect and present information about any offline media. As disclosed in the present invention, the probe not only detects the type of offline media over which it is placed, but also transmits this information back to a computer such that related multimedia data is displayed. For example, if a probe of the present invention is dragged over a

picture of a human hand, and the probe is selected as a microscope, an associated computer will retrieve information showing a cell structure of the animal (*Fig. 2b*). If the probe is selected as an x-ray, the associated computer would retrieve information showing the bone structure of the specific animal (*Fig. 2b*). Clearly, the present invention teaches above and beyond obtaining input, storing it, and displaying it.

With regard to claim 16, the Examiner has cited Mault as teaching various physiological monitor modules used with computing devices. Specifically, the Examiner cites column 1, lines 40-45 of the Mault reference as providing for a hand-held imager, however, a closer reading of the referenced sections provides for portable electronic device, specifically mobile telephones, electronic books, laptops, and other handheld computers. Clearly, this is different from the hand-held imager of the present invention which a user manipulates probe over a medium, information detected by the probe is transmitted by probe to general-purpose computer. Specifically examples were given in the application as filed; specifically, such a probe could be embodied as a bar code reader, magnetic digitizer, active electrostatic probe, or ultrasonic device. The section referenced by the Examiner in the Mault reference does not provide for a probe that detects information, rather it provides examples of a computing device, for which a human user must provide input through a keyboard or keypad.

Also with regards to claim 16, the Examiner also cites column 5, lines 25-56 of the Mault reference as providing for said imager detecting a region of said off-line media and transmitting information. However, in actuality, the referenced sections provide for a physiological monitor that measures one or more physiological parameters and stores the resulting data to memory; and that the monitor may also be interconnected with, or otherwise placed in communication with a PDA. Such a physiological monitor requires both a human body from which input is received and some type of knowledge about the type of input that is to be received. However, the present invention does not require this, rather, the present inventions allows a probe to be simply guided over the chosen off-line media and information is automatically transmitted to a computer and presentation device; off-line media is any of: books, magazines, newspapers, posters, pictures, mosaics, tapestry, two and three dimensional objects, animals, people, furniture, toys, cups, plates, silverware, business cards, and clothing. By its very nature, a physiological monitor is only used to obtain data about the human body.

Also with regard to claim 16, the Examiner has cited column 1, lines 1 – 14 of the Mault

reference as providing for an electronic representation of a region of off-line media and a presentation device presenting electronic media synchronized to said region of off-line media. However, the referenced sections only disclose a reference to related applications and related serial numbers.

With regard to claims 18, 19, 22, and 23 the Mault reference cannot possibly provide for the limitations of storing electronic media that is synchronized to the movement of a hand held imager over offline media or for simulating the function of real tools because *neither* makes any provision or even a suggestion for storing electronic media that is related or representative of the offline media or for synchronizing such data to the movement of a probe.

With regard to claim 20 and 24 the Mault reference does not make reference, explicit or implicit to a probe as a telescope, spectrum analyzer, radio telescope, magnetometer, scale, seismometer, ground penetrating radar, x-ray, pH device, thermometer, stethoscope, electrophoretic device, Geiger counter, chemical assay device, book reader, word pronouncer, book translator or dictionary.

REJECTIONS UNDER 35 U.S.C. § 103(a)

To establish a *prima facie* case of obviousness under U.S.C. § 103, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Additionally, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure (In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). Applicants contend, as seen in the arguments above, that the Examiner, based on the office action of 05/03/2004 has failed to establish a *prima facie* case of obviousness under U.S.C. §103.

Claims 1-15 and 27-31 stand rejected under 35 USC 103(a) as being obvious by Mault et al. in view of Boldt et al. (USP 6349304).

With regard to claims 1 and 29, the Examiner has again cited the Mault reference as

providing for a computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium. Specifically, the Examiner cites column 1, lines 55-61; however, a closer reading of the referenced sections provide simply for a digital camera interconnected with a PDA. A digital camera interconnected with a PDA can hardly be considered an offline medium; by virtue of the fact that the digital camera is an electronic device and has a port with which to interconnect the PDA, there is no way that can possibly be offline. Similarly the Boldt reference makes no provision for displaying data based on a selected portion of an offline medium; the Examiner has failed to meet the requirement of particularly pointing out the portion of the reference he or she believes to read on the particular claim limitation. The Examiner has pointed to columns 61-67 of the Boldt reference; the last column in the Boldt reference is column 20.

It is unclear how the Boldt invention relates to the present invention; it is directed to configuring features of a source device and target device over a network. More specifically, the Boldt reference allows a user to copy values for selected features from one device or file to multiple devices, such as printers. However, the present invention has nothing to do with copying. There is no mention of any device such as a probe that obtains data from a region of offline media. There is no mention of an offline media. Furthermore, there is no mention of multimedia data and consequently, no mention of multimedia data synchronized with the region of offline media over which the probe is manipulated. The Boldt reference is primarily directed towards devices in the arena of networking, and in particular determining a set of features that a target device is capable of implementing. This is clearly very different from the present invention in using the probe with multimedia information synchronized with the offline region selected provided to a display. Clearly, if both the probe and the probed object were online, as in the Boldt invention, there would be no need to synchronize multimedia information to the probed object; the multimedia information would simply be provided, in real time, over the network.

Column 18, lines 4-5 of the Mault reference does not provide for a probe device comprising at least a hand-held probe section transmitting information to a computer; rather, the cited section provides for thermometer shaped probes and measurement devices. The difference between a thermometer and the present invention is that a thermometer will simply display the obtained measurement of body heat on an LCD display screen whereas the present invention will obtain new information about the probed offline media. The newly obtained information

provides more than simply displaying obtained measurements; rather, what is provided is a multimedia information that is synchronized with the offline media. In other words, the information displayed on the computer screen is not necessarily only measurement data from the offline media itself, but information about the media that is stored in a database or obtained from the Internet. One difference between the present invention and both the Boldt and Mault inventions is that the present invention retrieves and presents previously stored multimedia data whereas the Boldt and Mault references simply provide for displaying the measurements actually obtained by a probe.

Column 1, lines 40-45 of the Mault reference are cited by the Examiner as providing for real tool multimedia data representative of an output of a real tool and wherein a computer retrieves real tool data synchronized to a position of selected portions of offline media. The referenced sections merely provide for the prevalence of PDAs, and those particularly with a slot for accepting a memory card. Nowhere in either the Mault or Boldt reference is it provided to store data that is representative of the probed offline media portion; rather, measurement data that is *actually obtained* is displayed.

With regard to claims 2, 3, 7, 11, 28, and 30, the Mault and Boldt references cannot provide for a plurality of icons printed on the off-line media, each of the icons indicating a different real tool, and selection of an icon by said hand-held probe part changing said multimedia data synchronized with portion of offline media nor for a position determination means to determine relative position of a sampled image to a reference image because neither reference, either singly or in combination, provides for synchronized multimedia data representative of data the real tool would output.

With regard to claim 4, 27, and 31, neither the Mault nor Boldt references make reference, explicit or implicit to a probe as a telescope, spectrum analyzer, radio telescope, magnetometer, scale, seismometer, ground penetrating radar, x-ray, pH device, thermometer, stethoscope, electrophoretic device, Geiger counter, chemical assay device, book reader, word pronouncer, book translator or dictionary. The Examiner has again pointed to a non-existent set of columns in the Boldt references (i.e. columns 61-67) as providing for the above-mentioned probes.

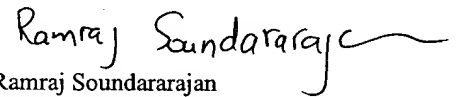
With regard to the remaining dependant claims 5, 6, 8-10, 12-15, 17, 21, 25, and 26 the above mentioned arguments made for independent claims substantially apply in that the

dependant claims inherit the limitations of the claims upon which they depend. Specifically, neither the Mault nor the Boldt reference, either singly or in combination provide for at least the following elements of the claims:

- a hand-held probe including a camera to capture an image of said selected portion and outputting a sampled image;
 - an image retrieval means to match a sampled image to stored reference images;
 - outputting the position of sampled image in identified reference image wherein a presentation device presents electronic media based on position and identified reference image;
 - a hand-held probe section and bar code wherein each bar code designates position data such that a computer retrieves and displays data synchronized to said bar code;
 - bar codes printed on an overlay superimposed on said off-line media;
 - a bar code reader recognizing said bar codes printed with infrared ink;
 - a probe device used as a digitizer using any of: magnetic fields, electric fields, or ultrasonic sound to determine the hand-held probe position;
 - a user using a part of his hand as a probe; and
- a presentation device providing a visual display.

As this Appeal Brief has been timely filed within the set period of response, no petition for extension of time or associated fee is required. However, the Commissioner is hereby authorized to charge any deficiencies in the fees provided, to include an extension of time, to Deposit Account No. 09-0441.

Respectfully submitted by
Applicant's Representative,



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August 23, 2005

CLAIMS APPENDIX:

1. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, said system comprising:

a probe device comprising at least a hand-held probe section, said probe device transmitting information of said selected portion to said computer;

a computer storage medium, said storage medium retaining multimedia data, said multimedia data representative of an output of a real tool examining a selected portion of an actual item corresponding to said selected portion of said image, and

wherein said computer retrieves said multimedia data synchronized to a position of said selected portion and displays said multimedia data to simulate a real tool.

2. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 1, wherein said off-line medium includes a plurality of icons printed thereon, each of said icons indicating a different real tool, selection of an icon by said hand-held probe part changing said multimedia data synchronized with a portion of said image so as to be representative of an output of the real tool indicated by said icon.

3. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 1, wherein a computer display includes a plurality of icons printed thereon, each of said icons indicating a different real tool.

4. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 1, wherein said real tool is any one of a telescope, spectrum analyzer, radio telescope, magnetometer, scale, seismometer, ground penetrating radar, x-ray, pH device, thermometer, stethoscope, electrophoretic device, Geiger counter, chemical assay device, book reader, word pronouncer, book translator, or dictionary.

5. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 1, wherein said hand-held probe includes a camera to capture an image of said selected portion and outputs a sampled image.
6. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 5, further including image retrieval means to match said sampled image to stored reference images.
7. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 5, further including position determination means to determine relative position of said sampled image to said reference image.
8. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 1, wherein said hand-held probe section is a bar code reader and said off-line medium has a plurality of bar codes printed thereon juxtaposed with said image, each of said bar codes designating position data such that said bar code reader reads one of said bar codes, transmits data representative of said bar code, and said computer retrieves and displays data synchronized to said bar code.
9. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 8, wherein said bar codes are printed on an overlay superimposed on said off-line media.
10. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 8, wherein said bar code reader recognizes said bar codes printed with infrared ink.

11. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 1, wherein said probe device transmits position information such that said displayed data continuously changes synchronously to said hand-held probe parts movement across said image.

12. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 11, wherein said probe device is a digitizer using magnetic fields to determine the hand-held probe position.

13. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 11, wherein said probe device is a digitizer using electric fields to determine the hand-held probe position.

14. (A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 11, wherein a user uses a part of his hand as said probe.

15. A computer-based system for simulating a real tool in which a computer displays data based upon a selected portion of an image printed on an off-line medium, as per claim 11, wherein said probe device is a digitizer using ultrasonic sound to determine the hand-held probe position.

16. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, said system comprising:

a hand-held imager, said imager detecting a region of said off-line media and transmitting an electronic representation of said region to said computer; computer;

a presentation device, said presentation device presenting electronic media, synchronized to said region of off-line media.

17. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 16, wherein said presentation device is a visual display.

18. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 16, further including a multimedia database storing said electronic media to be presented wherein said electronic media is synchronized to movement of said hand-held imager over said off-line media.

19. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 16, wherein said synchronization simulates the functions of real tools.

20. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 19, wherein said real tool is any one of a telescope, spectrum analyzer, radio telescope, magnetometer, scale, seismometer, ground penetrating radar, x-ray, pH device, thermometer, stethoscope, electrophoretic device, Geiger counter, chemical assay device, book reader, word pronouncer, book translator, or dictionary.

21. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 16, further comprising:

a camera in said hand-held imager, said camera imaging said selected region of off-line media and outputting a sampled image;

a database, containing digital representations of reference images, said reference images including selected regions of off-line media;

an image retriever, receiving said sampled image and identifying said sampled image as a selected region of a reference image in said database,

a position detector receiving said sampled images and outputting position of said sample image in said identified reference image, and

wherein said presentation device presents said electronic media based on said position and said identified reference image.

22. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 21, wherein said electronic media is an image.

23. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 21, wherein said electronic media is sound, including any of spoken work, music, or sound effects.

24. A computer-based system in which electronic media to be presented by a computing device is synchronized to a selected region of off-line medium, as per claim 21, wherein said presented electronic media simulates the function of a real tool selected from the list of a telescope, spectrum analyzer, radio telescope, magnetometer, scale, seismometer, ground penetrating radar, x-ray, pH device, thermometer, stethoscope, electrophoretic device, Geiger counter, chemical assay device, book reader, word pronouncer, book translator, or dictionary.

25. A computer-based system in which electronic media to be displayed by a computer is synchronized to a selected region of an image printed on a off-line medium, as per claim 16, wherein said image is divided into a plurality of regions, each of said regions having a bar code printed therein, and said electronic media is representative of an output of a real tool examining a region of an actual item corresponding to said region of said image detected by a hand-held bar code reader used as said hand-held imager.

26. A computer-based system in which data to be displayed by a computer is synchronized to a selected region of an image printed on a off-line medium, as per claim 25, wherein said off-line medium includes a plurality of icons printed thereon, each of said icons indicating a different real tool, selection of an icon by said hand-held bar code reader changing said electronic media synchronized with each bar code printed in a region of said image so as to be representative of an output of the real tool indicated by said icon.

27. A computer-based system in which data to be displayed by a computer is synchronized to a selected region of an image printed on a off-line medium, said image divided into a plurality of regions, each of said regions having a bar code printed therein, as per claim 25, wherein said real tool is any one of a telescope, spectrum analyzer, radio telescope, magnetometer, scale, seismometer, ground penetrating radar, x-ray, pH device, thermometer, stethoscope, electrophoretic device, Geiger counter, chemical assay device, book reader, word pronouncer, book translator, or dictionary.

28. A computer-based system in which data to be displayed by a computer is synchronized to a selected region of an image printed on a off-line medium, said image divided into a plurality of regions, each of said regions having a bar code printed therein, as per claim 25, wherein said image is an image of a structure of a database and navigation of said database is synchronized to movements of said hand-held bar code reader over said image.

29. A method of simulating a real tool in which a computer displays data based upon a selection of a location of an image printed on a off-line medium by a hand-held probe, said off-line medium including a plurality of icons printed thereon, each of said icons indicating a different real tool, said method comprising:

receiving position information representative of a location of said image printed on said off-line medium said hand-held probe part is pointing to;

determining data synchronized to said location;

retrieving said data, said data representative of an output of a real tool examining a location of an actual item corresponding to said location of said image pointed to by said hand-held probe part, and

displaying said data.

30. A method of simulating a real tool in which a computer displays data based upon a selection of a location of an image printed on a off-line medium by a hand-held probe, said off-line medium including a plurality of icons printed thereon, each of said icons indicating a different real tool, as per claim 29, said method further comprising:

receiving icon information representative of one of a plurality of icons pointed to by said hand-held probe, said icon representative of a real tool;

changing said data synchronized with said location of said image so as to be representative of an output of the real tool indicated by said icon.

31. A method of simulating a real tool in which a computer displays data based upon a selection of a location of an image printed on a off-line medium by a hand-held probe, said off-line medium including a plurality of icons printed thereon, each of said icons indicating a different real tool, as per claim 29, wherein said real tool is any one of a telescope, spectrum analyzer, radio telescope, magnetometer, scale, seismometer, ground penetrating radar, x-ray, pH device, thermometer, stethoscope, electrophoretic device, Geiger counter, chemical assay device, book reader, word pronouncer, book translator, or dictionary.